

**U.S. Army Program Executive Office
for Simulation, Training and Instrumentation**



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STRI**

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Program Executive Office for Simulation, Training and Instrumentation

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Mission

To provide responsive interoperable simulation, training, and testing solutions and acquisition services for the Warfighters and the nation.

Vision

The Center of Acquisition Excellence providing simulation, training and testing solutions for the nation.

Motto

Putting the power of simulation into the hands of the Warfighters.

Focus

- Provide simulation, training and testing products and services.
- Expand beyond the traditional products and services.
- Provide an integrated and interoperable infrastructure.
- Shape a world-class workforce with acquisition, functional and leadership skills.
- Provide a full range of contracting and acquisition services for effective, efficient and responsive life-cycle management.
- Implement U.S. Army policy for acquisition of system training devices.



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James T. Blake, PH.D. (SES)

**Program Executive Officer,
U.S. Army Program Executive Office
for Simulation, Training and Instrumentation**

Dr. James T. Blake serves as the program executive officer for U.S. Army PEO STRI and head of contracting activity for Army simulation, training and instrumentation. He is responsible for providing materiel solutions and services in modeling, simulation, training and test-instrumentation to support the Warfighter.

Blake retired as an Army colonel after a distinguished military career. In his last assignment, Blake was the Army's senior uniformed scientist. He is a graduate of the U.S. Army Command and General Staff College, the Defense Systems Management College, and the U.S. Army War College. He has a Ph.D. in computer science from Duke University.

Following his military career, Blake held several technical and executive positions in industry before joining academia where he served as a senior research scientist at Texas A&M University. While at Texas A&M, Blake joined the Simulation, Training and Instrumentation Command as the program manager for the Institute for Creative Technologies.

In March 2003, he became a member of the Senior Executive Service. From March 2003 until June 2005, Blake served as the deputy program executive officer for PEO STRI. ■

A Message from the PEO

With the world's largest defense conference devoted to training, simulation and education, otherwise known as I/ITSEC, here once again, it is a great time to reflect on the important contributions these disciplines make to our Armed Forces.

This year alone, PEO STRI fielded nearly 4,500 improvised explosive device trainers. In addition, more than 42,000 Soldiers underwent critical convoy training; and 50 simulated Humvee rollover trainers prepared Warfighters to egress from an overturned vehicle. In fact, these egress trainers were so instrumental to our Soldiers' pre-deployment preparation that the device was recently named one of the Army's top inventions.

Beyond that, Soldiers from the 10th Mountain Division are currently using the PEO STRI-derived one-way language translators to interact with the local Iraqi population.

Furthermore, the Army selected one of our programs, One Semi Automated Forces, to become a major part of the embedded training solution for the Future Combat Systems.

Our contribution to the preparedness and readiness of our nation's Warfighters does not end there. PEO STRI opened a product office dedicated solely to medical simulation because we know just how much combat casualty care instruction is saving lives on the battlefield.

These are just a few examples of our committed effort to ensure our Warfighters maintain their prominence as the best-trained, best-equipped, best-led military force in the world.

We know we are not in this alone. Just like our Soldiers are working hand-in-hand with their fellow Marines, Sailors and Airmen in Iraq and Afghanistan, we in the simulation and training community—military, industry and academia alike—are one force supporting the strongest Armed Forces in the world. I think I speak on behalf of the entire community when I say we are very privileged and honored to do this.

As we celebrate the 30th anniversary of I/ITSEC with our sister services, industry partners, academia and allied forces, the U.S. Army PEO STRI is honored to take the reins as the lead service for this year's conference and demonstrate the many ways that together we collaborate, cooperate and combine forces to learn, train and win. ■

Mission first, people always. Army Strong!

Dr. James T. Blake

Program Executive Officer



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PEO STRI Places the Power of Simulation into the Hands of America's Warfighters

By: Kristen A. Dooley, U.S. Army PEO STRI Public Affairs Officer

The U.S. Army Program Executive Office for Simulation, Training and Instrumentation (PEO STRI) provides interoperable simulation, training and testing solutions for the Warfighters and the nation. PEO STRI offers life-cycle support for the Army's most advanced training systems around the world.

"The strength of the nation resides in our Soldiers, Sailors, Airmen, and Marines. It is our duty to ensure these Warfighters maintain their prominence as the strongest force in the world by equipping them with unsurpassed modeling, simulation, testing and training devices," said Dr. Jim Blake, program executive officer for PEO STRI.

The organization executes programs valued at \$3.2 billion with a workforce of nearly 950 military, civilian and contractor personnel. PEO STRI's Acquisition Center manages more than 850 contracts valued at almost \$9.3 billion.

PEO STRI sustains 335,000 training systems at 472 sites worldwide, including 19 foreign countries. In addition, PEO STRI's Foreign Military Sales program supports 63 countries. Headquartered in Central Florida's Research Park, the organization also has offices in Redstone Arsenal, Ala., Fort Bliss, Texas, and Fort Huachuca, Ariz.

Nearly all Soldiers deployed to a theater of combat operations have trained on a PEO

STRI-derived device. Some of these training aids and simulations include the Training Improvised Explosive Device, Engagement Skills Trainer 2000, Laser Marksmanship Training System, Mobile Military Operations on Urban Terrain, Aviation Combined Arms Tactical Trainer, Call for Fire Trainer and Medical Simulation Training Centers.

Among many recent achievements, PEO STRI proudly worked in close collaboration with other Army components to rapidly produce and field the Humvee Egress Assistance Trainer (HEAT) in response to the dan-

gers Warfighters were facing in the contemporary operating environment. The device represents the U.S. Army's first standardized vehicle egress trainer.

The HEAT, which properly trains Soldiers to egress from a rolled-over vehicle, proves to be an Army solution for an Army problem. Recently, the trainer was named one of the Army's best inventions by the Army Materiel Command.

It provides Soldiers with the familiarity of how it feels when a vehicle is on the verge of rolling over and what precautions to take to brace their bodies. Furthermore, it

instructs Warfighters on what to do once the Humvee has rolled—how to properly egress and help other Soldiers, especially the injured, get out as well.

If a gunner is in the hatch, the other trainees are responsible for pulling that Soldier back into the Humvee when the rollover is about to occur. Since the gunner is in the most vulnerable position in the vehicle, the gunner's cage on the HEAT trains Soldiers to react safely and effectively.

The device is capable of rotating and stopping in various positions making it the

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U.S. Army Photo/Doug Schaub

Soldiers at Fort Campbell, Ky., train on the Humvee Egress Assistance Trainer. After the simulated vehicle rotates in various positions, or "flips over," the trainees are instructed to safely egress. As pictured above, the Soldiers determine that the gunner's hatch is the quickest and safest way to exit. They are responsible for assisting anyone in the vehicle who is not able to egress on their own; this is simulated by a weighted mannequin.

Program Executive Office for Simulation, Training and Instrumentation

Power of Simulation... continued from previous page

only Army trainer that allows Soldiers to practice a variety of egress techniques at different angles.

External door locks allow the instructor to simulate obstructed doors that causes trainees to think about actions to take if they face a blocked door in an actual rollover.

As soon as an exit is identified, the Soldiers are instructed to yell: "Right rear door open," for example. Each Soldier exits the Humvee, establishes security and administers first aid if needed.

HEAT is produced and fielded by PEO STRI who worked in cooperation with the U.S. Army Tank Automotive Research Development and Engineering Center and Red River Army Depot for their engineering and manufacturing capabilities respectively. To date, 50 systems have been fielded to stateside and worldwide locations, in which thousands of Soldiers have trained on the system.

Real-world operational needs also prompted the rapid fielding of the Medical Simulation Training Centers, state-of-the-art trainers where Soldiers learn basic combat casualty care in both a classroom and simulated battlefield environment.

This combat casualty care instruction represents the U.S. Army's standardized medical training program. The program has reduced the died-of-wounds rate on the battlefield by providing Soldiers with the skills to save wounded Warfighters in combat.

The capability, managed by the Assistant Project Manager for Medical Simulation at PEO STRI, has trained more than

78,000 Soldiers since the program's inception in 2006.

PEO STRI has fielded 15 of the 18 MSTCs to domestic and worldwide locations; the remaining three will be fielded in 2008. One MSTC resides in theater and a deployable site can be used for contingency operations. An additional 18 sites are expected to be fielded over the next several years.

Through this instruction, Soldiers learn how to treat the three most preventable combat deaths: a collapsed lung, a blocked airway and blood loss. Students can also practice intubations, tracheotomies, inserting catheters, applying splints, treating chest wounds and inserting IVs.

Before the simulated battlefield training, Soldiers are provided classroom-based instruction to learn how to apply medical treatment in a high-stress combat environment. After the students complete their coursework, their knowledge is validated on this simulated battlefield.

During the hands-on training, Soldiers are assessed on a computer that monitors the mannequin's condition. Since the mannequins are physiologically based, their survivability is dependent upon what the trainee does or does not do.

If a student fails to administer proper care, the simulator will deteriorate and shut-down. Conversely, the student can also experience what happens when they successfully treat the simulator and the mannequin's conditions improve.

The Soldier's actions are monitored and recorded in

the master patient monitoring station. If the simulator "dies," the Soldier is retrained in the classroom and reassessed.

A large number of Soldiers undergo this training before they deploy to Iraq or Afghanistan because the combat arms Warfighter is usually the first responder since he or she is there at the point of injury. As a result, it is very important for non-medical Soldiers to learn these life-saving methods.

Warfighters who have undergone MSTC instruction and trained on the human-patient simulators said they feel they are learning critical skills that will increase survivability on the battlefield.

The current fight has greatly changed the way U.S.

forces are trained. Whether it is high-paced, high-skilled medical instruction or Humvee rollover training, U.S. Soldiers are refining their skills like never before.

For language and cultural training, this phenomenon is no different. Due to the nature of urban combat, Soldiers regularly interact with the Iraqi people and often without the support of a translator. In response, PEO STRI fielded a device, the Vcommunicator, that allows Soldiers to effectively communicate with the local Iraqi and Afghani populations.

PEO STRI saw the importance of quickly acquiring and fielding this device as the Army is currently experiencing a shortage of human translators in theater. For that rea-



U.S. Army Photo/Doug Schaub

A Soldier treats the mannequin's tension pneumothorax, or collapsed lung, through a needle decompression at a recent training exercise intended to prepare students for basic combat medical care. This instruction is part of PEO STRI's medical simulation program.

son, PEO STRI expedited the acquisition process to get the Vcommunicator into the hands of the 1st Brigade Combat Team at Fort Drum, N.Y., and the 4th Brigade Combat Team at Fort Polk, La., faster.

In fact, Soldiers from the 10th Mountain Division are currently using this state-of-the-art language and cultural handheld-translator in Iraq and Afghanistan. Considering the generation of Soldiers deployed to the theater of combat operations, the Apple iPod-based translator is not only easy to use, but also a trendy way to translate.

The device provides Soldiers with the ability to converse in Arabic, Kurdish, Pashtu and Dari languages while mimicking the correct cultural mannerisms. To do this, the Vcommunicator shows realistic, virtual characters that can lip-sync the spoken language while displaying culturally appropriate gestures.

The Soldiers can use the Vcommunicator either for training during downtime or during a mission. He or she can select a message on the device and the iPod, equipped with a speaker, will amplify that command. Soldiers can select from a laundry list of orders associated with interrogations, vehicle checkpoints and raids, for example.

One of the Soldiers assigned to PEO STRI, Sgt. Dennis Godfrey, got the chance to experience the Army's newest language and cultural training tool.

"In an ideal situation, everyone would have an interpreter; but with that not always being possible, the Vcommunicator

will help fill the gap," Godfrey said. "Soldiers will now be able to get their point across easier and be able to ask simple yes and no questions. I think the Vcommunicator will definitely help Soldiers communicate better with non-English speaking people in the absence of an interpreter."

Before Godfrey got to test out the new technology, the Vcommunicator was field tested by the 10th Mountain Division's 1st Brigade Combat Team at the Joint Readiness Training Center at Fort Polk, La.

The device received positive feedback in which one of the sergeants from the 1st Brigade Combat Team said it was incredibly easy to use and puts the "friend in user-friendly." He also said that he was able to use the device with no training or reference to a user's manual.

Warfighters around the globe are positively impacted by PEO STRI's recent undertakings, to include becoming an acquisition authority for the Army's system and non-system training devices, housing an Army Acquisition Center of Excellence, and forging strong joint partnerships to better contribute to Warfighter readiness.

"For those of us who acquire training and testing enablers, we will remain relentless in meeting the urgent needs of our customers—U.S. Soldiers and all American and allied armed forces alike—by providing them the best possible solutions," Blake said. "By standing up an Army Center for Acquisition Excellence, PEO STRI is achieving a higher level of service to the nation's men and women in uniform." ■



U.S. Army Photo/Doug Schaub

PEO STRI recently fielded the Vcommunicator, an iPod-based language translator, that will help Soldiers effectively communicate in Iraq and Afghanistan when human translators are not available. As pictured above, Soldiers wear the Vcommunicator on their wrists so that they can quickly use it when they need to communicate with an Iraqi- or Afghani-speaking person.



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